

COMPLETE LISTING OF PENDING CLAIMS

1. (Currently Amended) A seal ring (1) of a mechanical face seal device for jet engines adapted for rotation in common with an engine shaft, characterized in that it wherein said seal ring is formed of a composite material comprising a fibre-reinforced ceramic material.

2. (Currently Amended) The seal ring according to claim 1, characterized in that wherein the reinforcing fibres are selected from a group of reinforcing fibres comprising carbon and SiC fibres.

3. (Currently Amended) The seal ring according to claim 1 or 2, characterized in that wherein the ceramic material comprises a SiC material.

4. (Currently Amended) The seal ring according to any one of the preceding claims claim 1, characterized in that wherein the proportion of reinforcing fibre in the composite material amounts to between 45 and 65 volume %, preferably to between 50 and 60 volume %.

5. (Currently Amended) The seal ring according to any one of the preceding claims claim 1, characterized in that wherein the composite material comprises unaligned reinforcing fibres having a length of more than 5 mm, preferably of between 15 and 25 mm.

6. (Currently Amended) The seal ring according to any one of claims 1 to 4 claim 1, characterized in that wherein the composite material comprises aligned reinforcing fibres.

7. (Currently Amended) The seal ring according to ~~any one of the preceding claims~~claim
~~1, characterized in that~~wherein the diameter of the reinforcing fibres amounts to less than 15 µm,
preferably to between 2 and 12 µm.

8. (Currently Amended) The seal ring according to claim 6, ~~characterized in that~~wherein
a fabric of reinforcing fibres is provided.

9. (Currently Amended) The seal ring according to claim 6, ~~characterized by~~wherein
there is provided a fibre reinforcement which is produced by a fibre filament winding process.

10. (Currently Amended) The seal ring according to ~~any of the claims 6 to 9~~claim 6,
~~characterized in that~~wherein a surface layer consisting of a fibre-reinforced SiC composite
material is provided on at least one of the opposite end faces ~~(17, 18)~~(1) of the seal ring ~~(1)~~, whereby
the reinforcing fibres in the surface layer are unaligned.

11. (Currently Amended) The seal ring according to claim 10, ~~characterized in~~
thatwherein the thickness of the surface layer amounts to between 0.1 and 1.0 mm, preferably
between 0.25 and 0.5 mm.

12. (Originally Presented) The seal ring according to ~~any one of the preceding claims~~^{claim 1, characterized in that wherein} a seal face (13) having pumping structures (20) formed therein is formed in at least one of the end faces (17, 18) of the seal ring (1) or the end face (17) provided with the surface layer.

13. (Currently Amended) A mechanical face seal device for jet engines comprising at least one pair of cooperating seal rings (1, 2), of which one is designed for non-rotational mounting on a stationary component and the other for rotation in common with an engine shaft, characterized by ~~and further including~~ a pairing of materials for the seal rings (1, 2) which comprises a friction minimizing material for the non-rotational seal ring (2) and a composite material consisting of a fibre-reinforced ceramic material for the rotary seal ring (1).

14. (Currently Amended) The mechanical face seal device for jet engines according to claim 13, characterized in that wherein the composite material is a SiC composite material reinforced with carbon or SiC fibres.

15 (Currently Amended) The mechanical face seal device for jet engines according to claim 12 or 13, characterized in that wherein the friction-minimizing material is a carbon material.

16 (Currently Amended) The mechanical face seal device for jet engines according to any one of the claims 12 to 15~~claim 13, characterized in that wherein~~, for use in a low-pressure region of the jet engine, the composite material comprises unaligned reinforcing fibres having a

length of more than 5 mm, preferably of between 15 and 25 mm.

17.(Currently Amended) The mechanical face seal device for jet engines according to ~~any one of the claims 12 to 15~~claim 13, characterized in thatwherein, for use in a high pressure region of the jet engine, the composite material comprises aligned reinforcing fibres.

18.(Currently Amended) The mechanical face seal device for jet engines according to claim 17, characterized in thatwherein a surface layer consisting of a fibre-reinforced SiC composite material is provided on at least that one of the opposite end faces ~~(17, 18)~~ of the rotary seal ring ~~(1)~~on which a seal face ~~(13)~~is formed, whereby the reinforcing fibres of the surface layer are unaligned.

19. (Currently Amended) The mechanical face seal device for jet engines according to ~~any one of the claims 12 to 18~~claim 13, characterized in thatwherein pumping structures ~~(20)~~are formed in ~~a~~ or ~~said~~at least one of the seal faces ~~(13)~~of the rotary seal rings ~~(1)~~.

20. (New) The seal ring according to claim 7, wherein a surface layer consisting of a fibre-reinforced SiC composite material is provided on at least one of the opposite end faces of the seal ring, whereby the reinforcing fibres in the surface layer are unaligned.

21. (New) The seal ring according claim 1, wherein a seal face having pumping structures formed therein is formed in at least one of the end faces of the seal ring provided with a surface layer thereon.